

## Study indicates nine risk factors explain most heart attacks

Caroline White *Munich*

Nine in 10 heart attacks can be predicted on the basis of nine risk factors, which are the same all over the world irrespective of ethnic group or sex, global research in 52 countries has found.

An abnormal ratio of apolipoprotein A to apolipoprotein B—a more sensitive marker than the ratio of high density to low density lipoprotein—and smoking accounted for two thirds of total risk.

Smoking six to 10 cigarettes a day doubles the risk of heart attack, according to the findings. Smoking 20 cigarettes a day increases the risk fourfold and 40 cigarettes a day gives rise to a ninefold increase in risk.

Other factors included high blood pressure, diabetes, abdominal obesity, low daily fruit and

vegetable consumption, a lack of exercise, and stress. However, a small amount of alcohol—around three drinks a week—was moderately protective.

Previous evidence has suggested that only half the risk factors for heart disease can be predicted.

The findings, which were presented ahead of publication in the *Lancet* at the European Society of Cardiology Congress held in Munich this week, have prompted the authors to call for concerted political action in the arena of food production, tobacco control, and transport policies.

The first such study of its kind, Interheart, included monitoring 15 152 patients after a first heart attack matched with 14 820 people without heart disease for a

decade. With the exception of Antarctica, every continent was represented.

The average age of a heart attack was 56 for men and 65 for women, but people in the Middle East, Africa, and South Asia tended to have an attack 10 years younger. And one in 10 of the people in those countries was under the age of 40.

"There are six billion people in the world, five billion of whom are not European, yet most of what we know about heart disease stems from the one billion in rich countries," said Salim Yusuf, professor of medicine at McMaster University, Canada, who led the study.

"Most of the world's population had a lipid level that put them at risk of heart disease," said

Professor Yusuf. A person with the complete range of risk factors would increase their chances of a heart attack by 335-fold, said Professor Yusuf.

Together, these factors accounted for 90% of heart attack risk, and were the same the world over. The effects were stronger in younger people, particularly for smoking and abnormal lipid ratio.

"Virtually all risk can be predicted," said Professor Yusuf. "This means that we know most of the causes of heart disease, and we have a lot of information to implement global risk strategies." □

Competing interests: Sanofi-Synthelabo paid for Caroline White's flight to and accommodation in Munich.

## UK audit will review pathologists' reports on adult autopsies

Susan Mayor *London*

The National Confidential Enquiry into Patient Outcome and Death (NCEPOD)—an independent UK body that does audits designed to assess and improve patient care—announced plans last week to review reporting procedures for adult autopsies ordered by coroners.

The study will assess the quality of pathologists' reports on adult autopsies requested by coroners, which account for 90% of post-mortem examinations in the United Kingdom. It will include all autopsies done during a one week period during 2005 in the regions covered by NCEPOD—England, Wales, and Northern Ireland. Independent reviewers from NCEPOD will assess the autopsy reports against guidelines developed by the Royal College

of Pathologists. They will make recommendations to inform future practice and guide development.

The study was proposed by the Royal College of Pathologists after concerns about the quality of reports on autopsies ordered by coroners, which have generally been considered to be less thorough than autopsies requested by hospitals. Autopsies are ordered by a coroner for people who have died unexpectedly or suddenly, who had not seen a doctor in the two weeks before death, or who died within 24 hours of admission to hospital. Autopsies are requested by hospitals for patients who have died after having had treatment during a hospital stay if there is some question about the cause of death.



An autopsy in progress

Christobel Hargraves, chief executive of NCEPOD, said, "There has been a marked difference between the quality of autopsies performed by pathologists based on a request from a hospital and those ordered by a coroner. Previous studies have shown that around 30% of coroners' autopsy reports do not give an accurate description of the death or what caused the death."

She suggested that this was

because pathologists carrying out these autopsies had not looked at the patient's case history or had not done a sufficiently thorough examination of the body. This difference was noted in the Shipman inquiry (into the deaths of patients murdered by the general practitioner Dr Harold Shipman) and in an inquiry by the Home Office, which resulted in measures designed to reshape the coroner's services. □